

Title (en)  
INTEGRATED MAGNETIC COMPONENT AND SWITCHED MODE POWER CONVERTER

Title (de)  
INTEGRIERTES MAGNETISCHES BAUTEIL UND SCHALTSTROMWANDLER

Title (fr)  
COMPOSANT MAGNÉTIQUE INTÉGRÉ ET CONVERTISSEUR DE PUISSANCE À MODE COMMUTÉ

Publication  
**EP 3349224 B1 20200527 (EN)**

Application  
**EP 17151232 A 20170112**

Priority  
EP 17151232 A 20170112

Abstract (en)  
[origin: EP3349224A1] The invention related to an integrated magnetic component (801) for a switched mode power converter. The integrated magnetic component comprises a single magnetic core structure formed by magnetic core elements (811, 812, 813, 814), wherein at least one of the magnetic core elements (811, 812, 813, 814) is a leg-core-element with a flange (822.4) and one or more legs (820a.4, 820b.4, 821.4) are arranged on one side of the flange (822.4). The magnetic core elements (811, 812, 813, 814) of the single magnetic core structure are linearly stacked. The integrated magnetic component further comprises an isolating transformer with a higher current transformer winding (807.1, 807.2) arranged on at least one leg (821.2, 821.3) of the magnetic core elements (811, 812, 813, 814), a lower current transformer winding (806.1, 806.2) arranged on at least one leg (821.2, 821.3) of the magnetic core elements (811, 812, 813, 814) and a first filter inductor comprising a first filter winding (808.1), arranged on at least one leg (821.1) of the magnetic core elements (811, 812, 813, 814). Herein the higher current transformer winding (807.1, 807.2) and the filter winding comprise (808.1, 808.2) at least an edgewise wound winding part. The invention further relates to a switched mode power converter.

IPC 8 full level  
**H01F 3/10** (2006.01); **H01F 27/28** (2006.01); **H01F 27/40** (2006.01)

CPC (source: CN EP US)  
**H01F 3/10** (2013.01 - EP US); **H01F 27/06** (2013.01 - US); **H01F 27/24** (2013.01 - CN US); **H01F 27/263** (2013.01 - CN); **H01F 27/2823** (2013.01 - CN); **H01F 27/2866** (2013.01 - EP US); **H01F 27/306** (2013.01 - CN); **H01F 27/34** (2013.01 - CN); **H01F 27/346** (2013.01 - US); **H01F 27/40** (2013.01 - EP US); **H02M 3/33573** (2021.05 - CN); **H01F 27/34** (2013.01 - US); **H01F 2027/065** (2013.01 - US); **H01F 2027/408** (2013.01 - EP US); **H02M 1/0064** (2021.05 - US); **H02M 3/33573** (2021.05 - EP US); **Y02B 70/10** (2013.01 - EP)

Cited by  
EP4012733A3; EP3739601A1; US11631523B2; EP3926648A1; EP4205150A4; EP4379759A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3349224 A1 20180718**; **EP 3349224 B1 20200527**; CN 108364761 A 20180803; CN 108364761 B 20221230; CN 116190070 A 20230530; EP 3699936 A1 20200826; HK 1254801 A1 20190726; US 10325714 B2 20190618; US 10886046 B2 20210105; US 2018197673 A1 20180712; US 2019272941 A1 20190905

DOCDB simple family (application)  
**EP 17151232 A 20170112**; CN 201810031946 A 20180112; CN 202211593602 A 20180112; EP 20169447 A 20170112; HK 18113886 A 20181031; US 201815868744 A 20180111; US 201916415606 A 20190517